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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/606,443	06/25/2003	James N. Buttrick JR.	BO1 - 0034US	2939
60483	7590	05/10/2006	EXAMINER	
LEE & HAYES, PLLC 421 W. RIVERSIDE AVE. SUITE 500 SPOKANE, WA 99201			TALBOT, MICHAEL	
			ART UNIT	PAPER NUMBER
			3722	

DATE MAILED: 05/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/606,443

Applicant(s)

BUTTRICK ET AL.

Examiner

Michael W. Talbot

Art Unit

3722

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 20 December 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-5, 7-9, 11-18, 20-22, 24-33 and 35-47 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 38-42 is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-9, 11-18, 20-22, 24-33, 35-37 and 43-47 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 December 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 09/19/05, 11/21/05.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "first and second elongated flexible rails" along with the "plurality of vacuum attachment devices" recited in claims 13 and 26 in combination with the "biasing device" recited in claims 1 and 14, respectively, must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

2. The disclosure is objected to because of the following informalities:

As previously indicated in the original Office Action dated 06 September 2005, refer to page 14, line 28, the character reference "motor 3332" should be changed to read --motor 332--.

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Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 13 and 26 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

5. As previously indicated in the original Office Action dated 06 September 2005, the further limitations of the base recited in claim 13, specifically first and second elongated flexible rails with a plurality of vacuum attachment devices connected to each rail, have not been shown in combination with the apparatus as recited in claim 1.

6. As previously indicated in the original Office Action dated 06 September 2005, the further limitations of the base recited in claim 26, specifically first and second elongated flexible rails with a plurality of vacuum attachment devices connected to each rail, have not been shown in combination with the apparatus as recited in claim 14.

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the

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applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 1-5,8,9,12,14-18,21,22,25,28-33,35,36 and 43-47 are rejected under 35 U.S.C. 102(b) as being anticipated by Kim '133. Kim '133 shows in Figures 3,8a,8b,9,10a,10b and 11 an apparatus (J) for supporting a tool (26) comprising a base (4) having at least one elongated, flexible rail (4) adapted to be attached to the work piece, a tool support (33,34,35) coupled to the base (via carriage assembly 22) and moveable along a translation axis (vertical direction), and a biasing device (M,3h,R,27) including a motor (M) coupled to the tool support and adapted to at least partially counterbalance a force exerted on the tool support along the translation axis (col. 4, lines 49-57). Kim '133 shows the translation axis having at least a component (vertical direction) that is perpendicular to a local normal to the surface of the work piece (A,A'). Kim '133 shows the tool support is slideably coupled to the base via carriage assemblies (22) and rollers (13,13',13'',31) along at least one guide rail (4) and moveable in a first direction along the translational axis and a second direction along the translation axis opposite to the first direction (moveable back and forth along rails). Kim '133 shows the biasing device including a pneumatic actuator (27). Kim '133 shows the biasing device being controllably biasable (via motor M) in a biasing direction along the translation axis (biasing direction and translation axis are both along vertical direction). Kim '133 shows a carriage assembly (22) being moveably coupled to the at least one guide rail (4) via rollers (13,13',13'',31) and including a drive assembly (motor M in combination with pinion gear 3h and rack R) for movement back and forth along rails. Kim '133 shows the biasing device including a pressurizable cylinder (27) rigidly coupled to the base and the tool support adapted to at least partially counterbalance a force exerted on the tool support (col. 6, lines 1-7).

It has been held that a recitation that an element is "adapted to" perform a particular function is not a positive limitation and must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In the above reference, the base (4) is capable of being attached to the work piece (A,A') regardless of how.

9. Claims 1-5,8,9,11-18,21,22,24-33,35-37 and 43-47 are rejected under 35 U.S.C. 102(e) as being anticipated by Boyl-Davis et al. '328.

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Boyl-Davis et al. '328 shows in Figures 1-7 an apparatus (20) for supporting a tool (80) comprising a base (22,24,28,28') having two parallel, spaced apart flexible rails (38,58 and col. 4, line 39 through col. 5, line 4) adapted to be attached to the work piece via vacuum cup assemblies (26), a tool support (70) coupled to the base (via carriage assemblies 30,50) and moveable along a translation axis (X-axis,Y-axis), and a biasing device (40,60,70,92,94,96,100) including a motor (40,60) coupled to the tool support and adapted to at least partially counterbalance a force exerted on the tool support along the translation axis (motors 40,60 in combination with pinion gears 44,66 and racks 38,58 to stabilize tool support during drilling thus counterbalance a force exerted on the tool support along the translation axes). Boyl-Davis et al. '328 shows the translation axis having at least a component (X-axis,Y-axis) that is perpendicular

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to a local normal to the surface (Z-axis, vertical direction) of the work piece. Boyl-Davis et al. '328 shows the tool support is slideably coupled to the base via carriage assemblies (30,50) and rollers (32,56) along guide rails (22,24) and moveable in a first direction along the translational axis and a second direction along the translation axis opposite to the first direction (moveable back and forth along rails). Boyl-Davis et al. '328 shows the biasing device including a pneumatic actuator (92,100). Boyl-Davis et al. '328 shows the biasing device being controllably biasable (via motors 40,60) in a biasing direction along the translation axis (biasing direction and translation axis are both along X-axis and Y-axis). Boyl-Davis et al. '328 shows the translation axis (Y-axis) being at least partially transverse to the elongated rail member (which run in the X-axis). Boyl-Davis et al. '328 shows a carriage assembly (30,50) being moveably coupled to the guide rails (22,24) via rollers (32,56) and including a drive assembly (motors 40,60 in combination with pinion gears 44,66 and racks 38,58) for movement back and forth along rails. Boyl-Davis et al. '328 shows a manufacturing drilling tool (80) coupled to the tool support and adapted to engage the work piece surface to perform a manufacturing operation (col. 6, lines 24-53). Boyl-Davis et al. '328 shows the biasing device including a pressurizable cylinder (104,108) rigidly coupled to the base and the tool support (col. 6, line 60 through col. 7, line 16) adapted to at least partially counterbalance a force exerted on the tool support.

***Claim Rejections - 35 USC § 103***

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 7 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boyl-Davis et al. '328. Boyl-Davis et al. '328 lacks specific reference to the motor being a constant

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torque motor. Instead, *Boyl-Davis et al.* '328 is silent to the specific type of motor. At the time of the invention was made, it would have been an obvious matter of design choice to a person of ordinary skill in the art to select "a constant torque motor" because Applicant has not disclosed that the "constant torque motor" provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected the apparatus of *Boyl-Davis et al.* '328, and Applicant's apparatus to perform equally well with either the "generic motor" taught by *Boyl-Davis et al.* '328 or the claimed "constant torque motor" because selecting a known "motor type" on the basis of its suitability for the intended use is a matter of obvious design choice.

Furthermore, Applicant does not provide any criticality or unexpected results for the "constant torque motor" as recited in claims 7 and 20.

12. Claims 7 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Kim* '133. *Kim* '133 lacks specific reference to the motor being a constant torque motor. Instead, *Kim* '133 is silent to the specific type of motor. At the time of the invention was made, it would have been an obvious matter of design choice to a person of ordinary skill in the art to select "a constant torque motor" because Applicant has not disclosed that the "constant torque motor" provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected the apparatus of *Kim* '133, and Applicant's apparatus to perform equally well with either the "generic motor" taught by *Kim* '133 or the claimed "constant torque motor" because selecting a known "motor type" on the basis of its suitability for the intended use is a matter of obvious design choice.

Furthermore, Applicant does not provide any criticality or unexpected results for the "constant torque motor" as recited in claims 7 and 20.



***Allowable Subject Matter***

13. The indicated allowability of claims 6,7,12,19,20,25 and 34 are withdrawn in view of the newly discovered reference(s) to Boyl-Davis et al. '328 and Kim '133. Rejections based on the newly cited reference(s) are as described above.

14. Claims 38-42 are allowed (as previously indicated in the original Office Action dated 06 September 2005).

The following is a statement of reasons for the indication of allowable subject matter:

Claim 38 is the sole independent claim.

The Prior Art of Record fails to anticipate or make obvious, solely or in combination, the method steps in specific sequential order as presented by the Applicant, specifically the final three steps of (1) securely engaging the manufacturing tool with the surface of the work piece, (2) with the manufacturing tool securely engaged with the surface of the work piece, detaching the support member from the surface of the work piece, and (3) with the manufacturing tool securely engaged with the surface of the work piece, moving the support member relative to the manufacturing tool.

***Response to Arguments***

15. Applicant's arguments with respect to claims 1-5,8-11,13-18,21-24,26-33 and 35-37 under 35 U.S.C. 102(b) and 35 U.S.C. 102(e) have been considered but are moot in view of the new ground(s) of rejection made in view of Kim '133 under 35 U.S.C. 102(b) and 103(a) and Boyl-Davis et al. '328 under 35 U.S.C. 102(e) and 35 U.S.C. 103(a).

***Conclusion***

16. Any inquiry concerning the content of this communication from the examiner should be directed to Michael W. Talbot, whose telephone number is 571-272-4481. The examiner's

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office hours are typically 8:30am until 5:00pm, Monday through Friday. The examiner's supervisor, Mrs. Monica S. Carter, may be reached at 571-272-4475.

In order to reduce pendency and avoid potential delays, group 3720 is encouraging FAXing of responses to Office Actions directly into the Group at FAX number 571-273-8300. This practice may be used for filling papers not requiring a fee. It may also be used for filing papers, which require a fee, by applicants who authorize charges to a USPTO deposit account.

Please identify Examiner Michael W. Talbot of Art Unit 3722 at the top of your cover sheet.



MWT  
Examiner  
6 May 2006



MONICA CARTER  
SUPERVISORY PATENT EXAMINER



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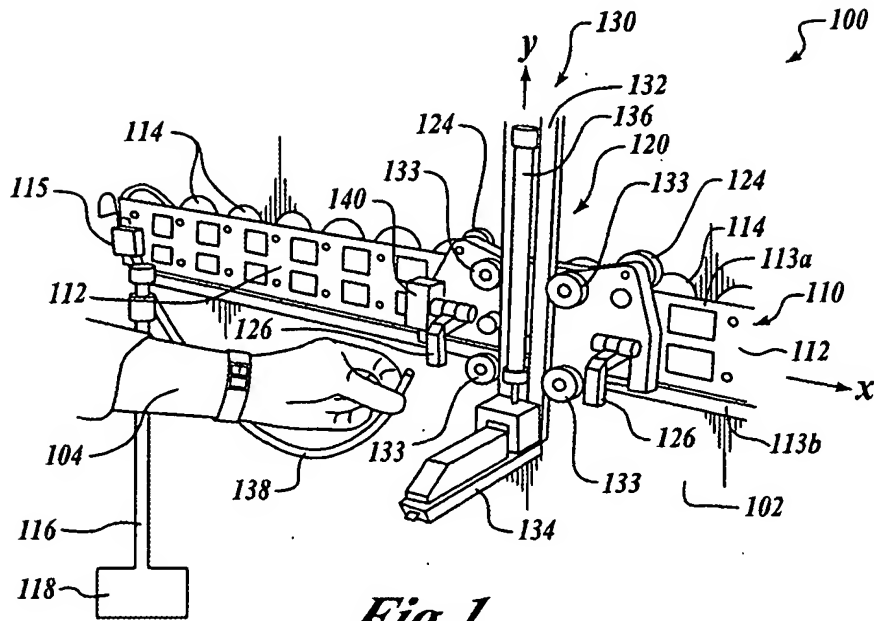


Fig. 1

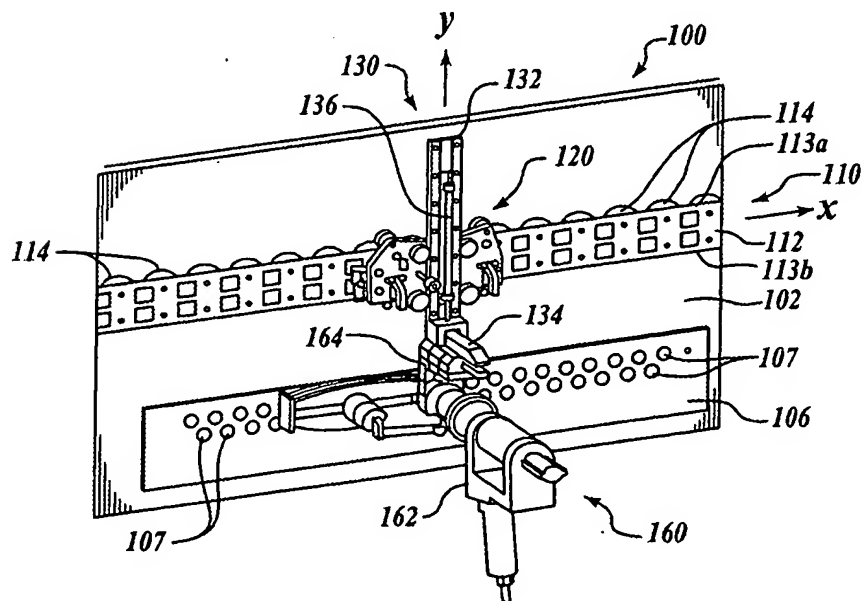
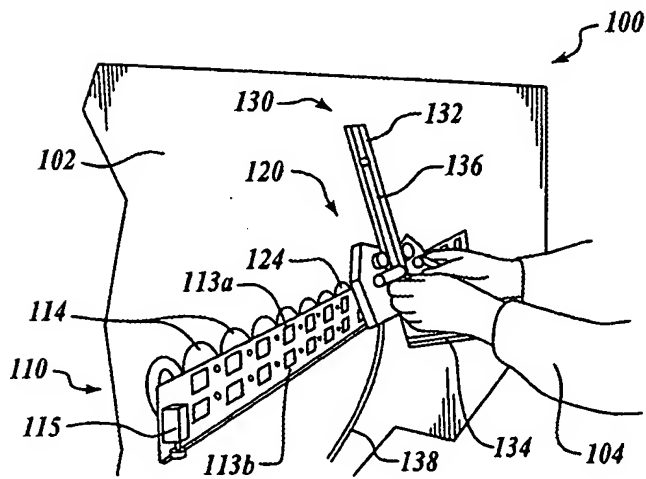
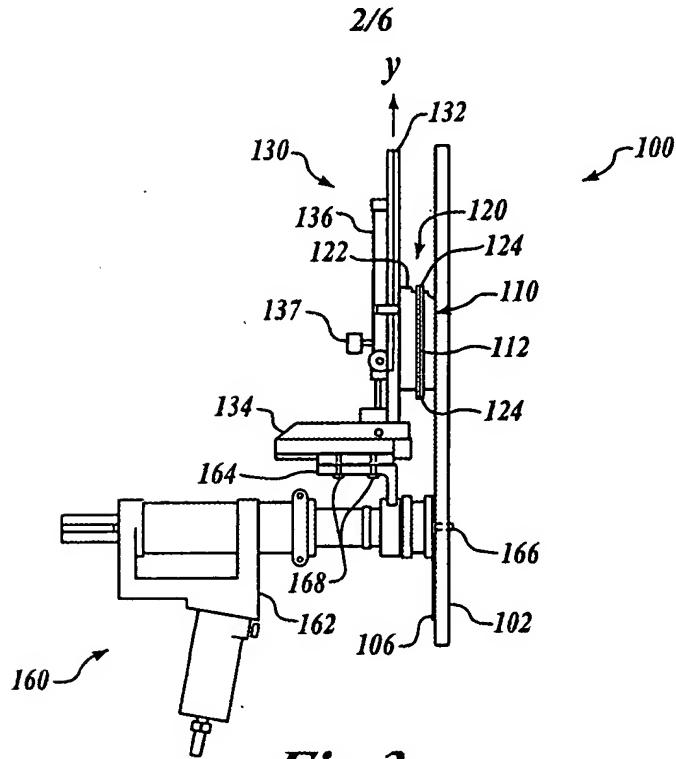


Fig. 2

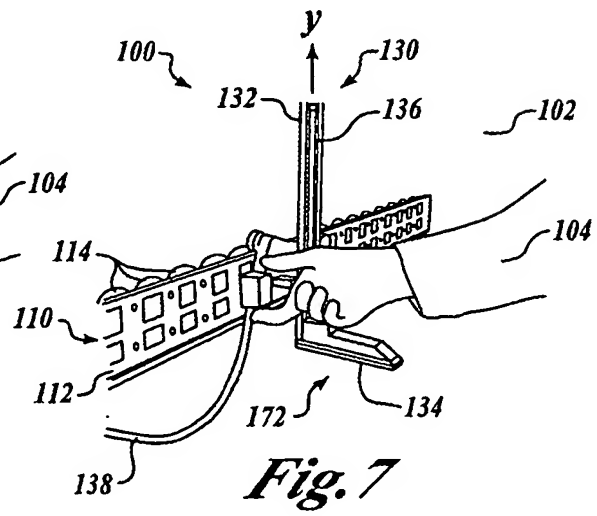
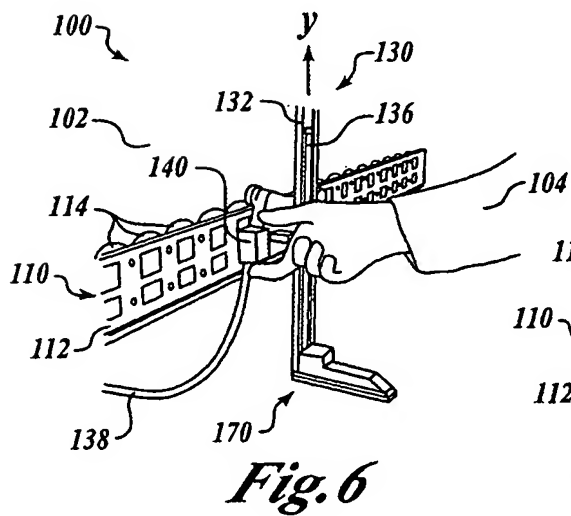
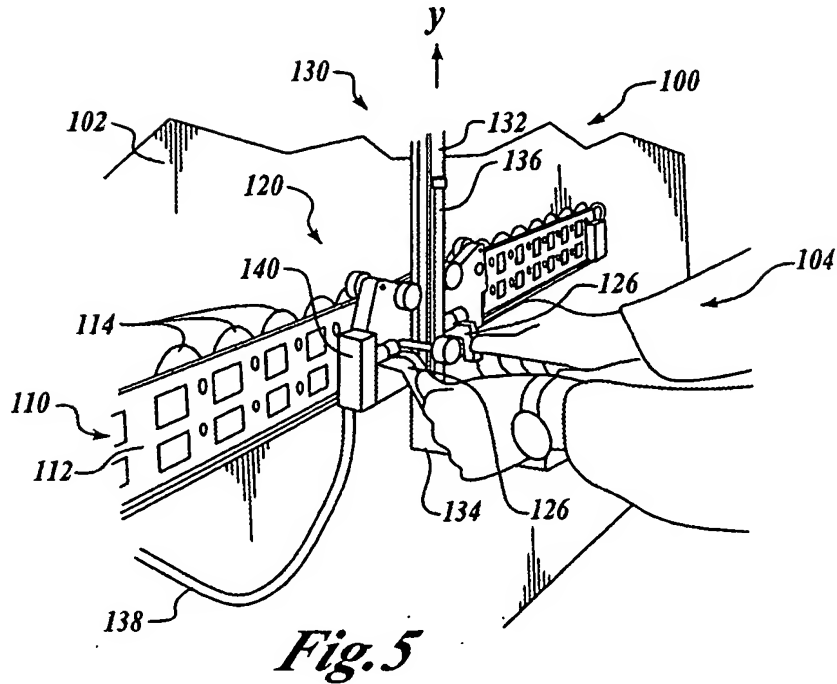
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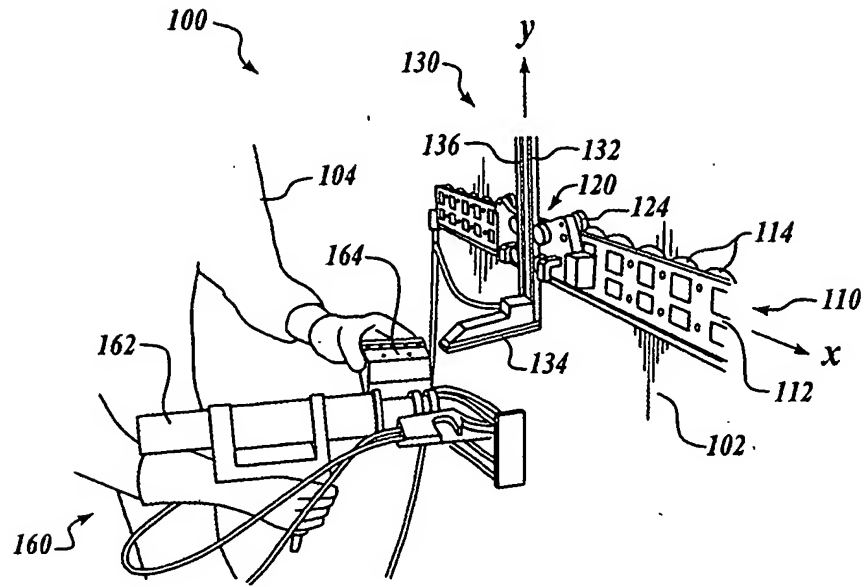
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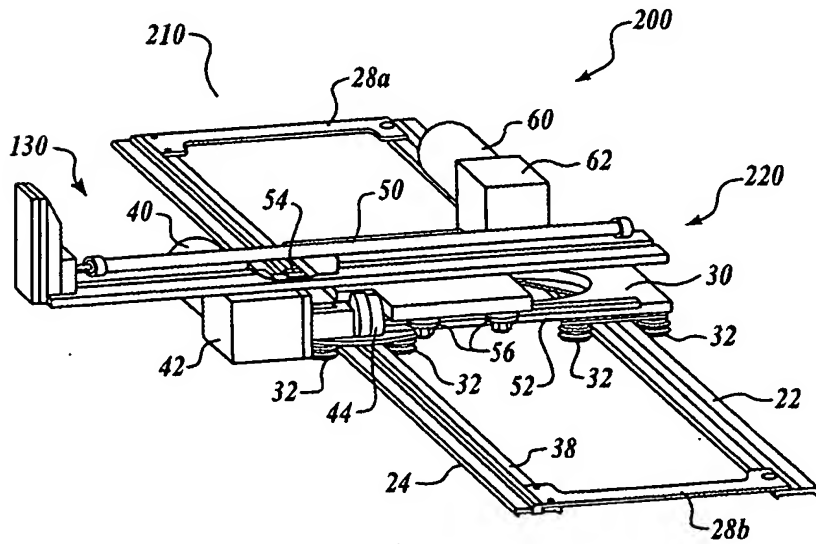
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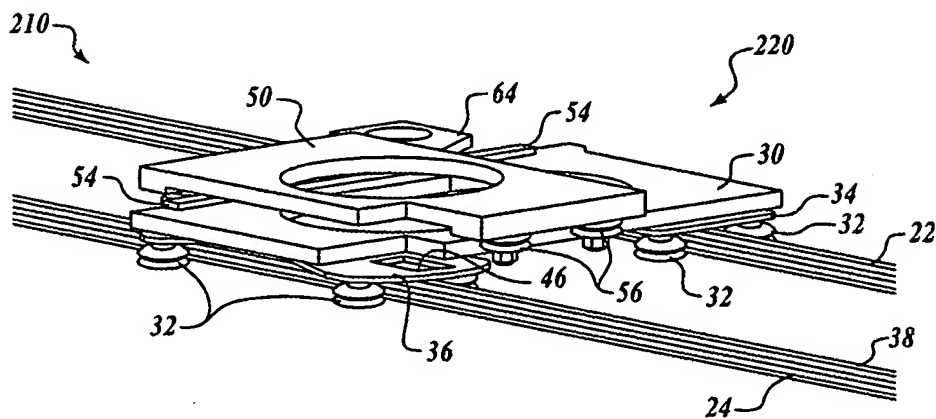
*Fig. 8*



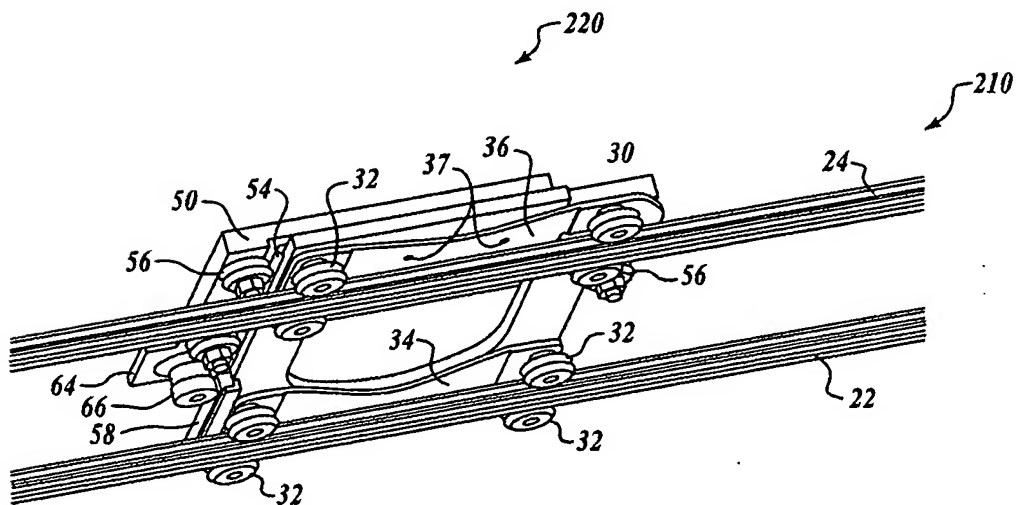
*Fig. 9*

ENTER 5/6/06 *PLW*

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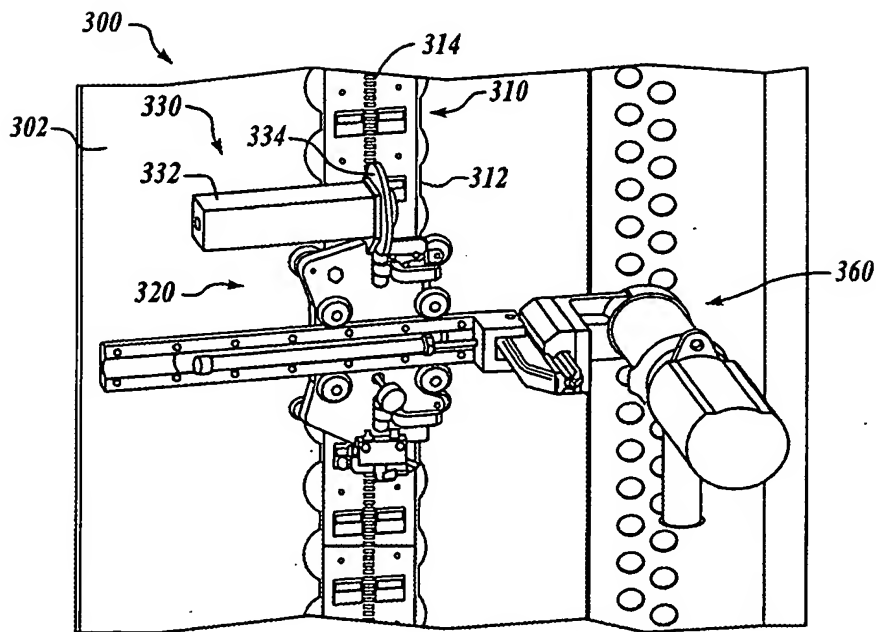
*Fig. 10*



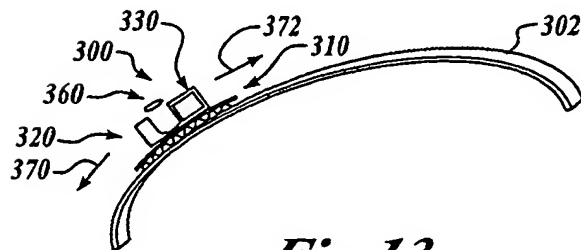
*Fig. 11*

ENTER 5/8/06 *AMR*

6/6



*Fig. 12*



*Fig. 13*

ENTER 5/6/06 *EW*